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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/581,853

06/05/2006

Jens C. Rasmussen

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EXAMINER

RAHLL, JERRY T

ART UNIT

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/581,853	Applicant(s) RASMUSSEN ET AL.	
	Examiner JERRY T. RAHLL	Art Unit 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 13-15 is/are rejected.
- 7) ☒ Claim(s) 5-8, 11, 12 and 16-18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/5/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on June 5, 2006 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

2. The drawings submitted have been reviewed and determined to facilitate understanding of the invention. The drawings are accepted as submitted.

Claim Objections

3. Claims 5-8 are objected to because of the following informalities: Claims 5-8 use the language of "like" in claiming features. This is not proper because the claims includes elements not actually disclosed (those encompassed by "like"), thereby rendering the scope of the claims unascertainable. Please see MPEP § 2173.05(d). These claims shall be construed in such that the structures described in the "like" clauses need not be present, only that the structures be controllable or operable (depending upon the claim language).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 1-4, and 13-15 rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 7,103,283 to Mikami et al.

6. Regarding Claim 1, Mikami describes a polarization mode dispersion compensator (see Fig. 2) comprising a polarization controller (12) to transform the polarization of an input optical signal (1), a compensating device (13, 14) to compensate for a polarization mode of the input signal and output an output signal, a signal quality monitor (3) to measure the output optical signal and generate a feedback signal, and a control unit (2,4) to determine the amount of change of a control signal applied to the polarization controller for each feedback loop, by evaluating the degree of polarization response using a plurality of feedback signals, change the control signal by the determined amount, and apply a changed control signal to the polarization controller (see Columns 4-7).

7. Claims 2-4 and 13 describe the compensator or signal quality monitor using functional language. While this is proper, the described device must distinguish from the prior art based on structural differences (see MPEP § 2114). There is no structural element of these claims not described by Mikami. Therefore, the claims are anticipated.

8. Claim 14 is essentially a re-wording of the claim limitations of Claim 1. As such, Claim 14 is anticipated for the same reasons as Claim 1, described above.

9. Claims 15 is a method embodied in the device described by Claim 1. As such, Claims 15 is anticipated for the same reasons as Claim 1, described above.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 5-10 rejected under 35 U.S.C. 103(a) as being unpatentable over Mikami et al.

12. Regarding Claims 5-8, polarization controllers comprising controllable birefringent elements of three-electrode sections of LiNbO₃ substrate are well-known in the art. Therefore, at the time of invention, it would have been obvious to one of ordinary skill in the art to use such a polarization controller structure to allow for electrical control of polarization.

13. Regarding Claims 9-10, dispersion compensation via fixed or adjustable differential group delay is well-known in the art. Therefore, at the time of invention, it would have been obvious to one of ordinary skill in the art to use such compensation means to allow for improved signal communication.

Allowable Subject Matter

14. Claims 11-12 and 16-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. Claims 11-12 describe the control unit determining the amount of change of the differential group delay for each feedback loop by evaluating past changes of the differential group delay. The prior art does not describe any means for such comparison in conjunction with the other limitations of the claims.

16. Claims 16-17 describe comparing a difference between a max and min of degree of polarization with a threshold value, and then increasing the amount of change when the

difference is greater than the threshold value. The prior art does not teach the use of such a threshold value.

17. Claim 18 describes marking change of the control signal leading to a worse compensation and skipping a control step with the marked change in succeeding feedback loops. The prior art does not describe skipping a control step in certain feedback loops.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JERRY T. RAHLI whose telephone number is (571)272-2356. The examiner can normally be reached on M-F (9:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jerry T Rahli

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